

How to Build a Kegerator

KEGERATOR: (keg' er a tor) (n) 1) The ultimate cool toy for home brewers. 2) A refrigerator dedicated to serving draft beer.

Everybody needs at least three of these: one for the basement, one for the main floor, and a remote with wheels that normally is located in the brewing garage but can also be rolled out into the back yard for picnics! Realistically, we're lucky to have one!

There are three different types of kegerators. The first and most common is a converted refrigerator with faucets installed through the side or door. Second is a short refrigerator usually built to hold a commercial half-barrel under or even with a bar counter - these usually have a draft tower with faucets attached to the top. The third is a converted chest freezer using a temperature control device with either one or more draft towers attached to the top.

The setup for the freezer will be almost identical to the vertical refrigerator, the main difference is that a temperature control device will be needed to maintain warmer temperatures. The need to build a bottom shelf will not be necessary.

The steps in building a kegerator from a regular refrigerator are:

- 1) Measure the inside for maximum width, depth and height to determine capacity
- 2) Build a strong bottom shelf to support your keg(s)
- 3) Install faucet shank(s) and faucet(s)
- 4) Layout and install gas line(s)
- 5) Try it out!

Task #1 Measure the inside of the refrigerator

The first step is to measure the inside of your refrigerator to determine maximum capacity. You'll need to remove all main shelves from inside. These are supported by various brackets connected to the all-plastic inside body of the fridge and aren't strong enough to support kegs of beer. Most every fridge has a ledge across the back/bottom of the fridge covering the compressor, measure the height from this point to the top. Measure the width at this same point. Measure the depth from the back of the fridge to either the inside of the door or to the fridge shelves if you plan on keeping them. If you are small (and flexible) enough to get inside and close the door, you'll be able to answer the question "does the refrigerator light go off when the door is closed?"

Cornelius kegs are 8-1/2" in diameter and 26" high, commercial kegs are about 16" diameter and 24" tall. A typical 21 cubic foot fridge will hold will hold 3 kegs wide and two deep or one commercial keg. Most home brewers won't have 6 faucets installed, but find the extra space great for lagering or chilling the next corny keg to put on tap. If you can't fit 3 kegs wide, you can zigzag them inside to maximize the number of Cornelius kegs it will hold. You will also need to take into account how far the door shelves extend inside when determining maximum depth.

Task #2: Build a strong bottom shelf to support your keg(s)

You'll need to build a wooden shelf to extend the compressor shelf to support your keg(s). This is the biggest task in building a kegerator.

Measure the height of the compressor shelf from the bottom of the fridge at both sides as well as the middle. You'll want to run boards parallel to the sides in these three places for the shelf supports and then others perpendicular for the deck. Next measure from the front edge of the compressor ledge to the door (or door shelves if you plan on keeping them) to determine how deep your shelf can be. Assuming we're using 2"x 6" or 2"x 8" boards for the supports and 1"x 8" boards for the deck, take the height at each support position and subtract 3/4", the result is the width of each support board to rip. This can be easily done on a table or

radial arm saw. If you only have a circular saw, use some short deck screw to attach each support to a base board, adjust the cut depth to just clear the support and rip. When you cut the length of the supports, cut the back end on an angle to closely fit against the compressor housing and better support the rear deck board. An option to a simple one-level deck is to drop the front 8-1/2" of the deck to allow for more head-space for the front row of kegs IF you can go two deep. See example below.



Task #3 Install faucet shank(s) and faucet(s)

Determine where you will put your faucets. Most people install them through the side, but sometimes door installation is selected. If you do choose a door installation, keep in mind that when you open the door, beer lines for each faucet will come out with it. If you choose side installation, check with the manufacturer to make sure there aren't any coolant lines in the sides. You can also verify this by turning the temperature dial warmer, then wiping some baking soda water on the side then turn the temperature down. If you see frosted coil patterns, you have coolant lines in the sides. Most refrigerators manufactured in the past 20 years have the coolant lines only in the back, but be sure!

If you are going to install a drip tray with a tall back that the faucets go through, drill the holes in the drip tray first, then use that as a pilot to drill the holes in the fridge. As the outside of the fridge is the only steel surface, drill from the outside with your hole saw so the drill doesn't drift. Our shanks have a 7/8" diameter, so you'll need that size hole saw. Locate the center line of the faucets above the top of your corny or commercial kegs so you don't lessen the usable space and keep positive pressure in your beer lines. After drilling the hole(s), insert the shank through the hole with the black flange remaining on the outside, then screw on the brass lock nut. Don't over tighten as the inside walls of the fridge are plastic. Then install a washer on the end of the shank and secure the tailpiece to it with a beer nut. Attach a 6' piece of beer line to the shank, the other to your disconnect. 6' lines are used to enable you to server at 12-14# pressure without getting too much foam. Finally, install the faucets on the outside with a faucet wrench.

Task #4 Layout and install gas line(s)

It is best to keep your CO2 bottle outside of the fridge. This will maximize inside space for kegs, but more importantly prevent internal condensation when removing the bottle for refilling in the warm summer months.

Before we decide on the various lengths of gas line we will use, let's talk about carbonation. If you are only going to serve commercial beer from your kegerator, you only need enough

gas line to reach your coupler/sanke. If you are going to serve home brew, you need to decide how you will carbonate your beer.

Homebrew will eventually carbonate after 4-5 days on 12-14 pounds of pressure or 24-30 hours at 30 pounds. You can also rock your corny keg on 30 pounds across your knee like it was a see-saw 100 times (every time the left side goes up, that's a count of one) then let it sit on 30 pounds for 2-6 hours and it will be carbonated. If you are planning on shaking kegs to quick carbonate, you'll need to have at least one gas line inside your kegerator to be 6 feet long so you can do the shaking outside. Otherwise, 3-4 feet per keg should be enough.

Most homebrewers will set up their kegerator to have 2 or 3 kegs on tap. To do this, you'll need to split the gas line inside your keg with either a chain of "T" connectors or a gas manifold. "T" connectors are cheaper than gas manifolds, but they do not come with shut-off valves to isolate already carbonated kegs from a new "flat" keg. But keep in mind, you can always remove the gas disconnects from carbonated kegs while you force carbonate another at a higher pressure. Below are pictures of a chained "T" installation and a 4-way gas manifold with shut-offs:



Determine where the "split" will be located, then measure from the outside regulator to the split for the first length of gas line. The rest will be 3-4 feet or 6 feet per your requirements.

Task #5 Try it out!

Make sure your faucets are shut before hooking your kegs up. Nothing worse than shooting good beer all over the floor! Spray some soapy water on your gas connections to make sure your CO2 will last as expected. If you get bubbles, you have a connection that needs fixed. Carbonate your beer (homebrew) then pour your first draft and take plenty of pictures!